

Application/Control Number: 09/711,740

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CLMPTO

SGREEN

12/21/04

Claims 1-21 are cancel.

22. (Currently Amended). An exercise device to simulate various types of stepping motions, comprising:

a frame having a pivot axis defined thereon, the frame configured to be supported on a floor;

a first and second foot link, each foot link including a first rearward end and a second forward end; a foot supporting portion for receiving the user's feet, the foot supporting portion supported by the first and second foot links, said foot supporting portion sized and positioned on the first and second foot links to receive and support the user's feet while standing, said foot supporting portion having a heel supporting section and a toe supporting section;

a coupling system associated with the first end of each foot link for coupling the first rearward end of each foot link to the pivot axis so that the first end of each foot link travels in a closed path relative to the pivot axis;

a guide associated with the frame and operative to engage and direct the second forward ends of the foot links along preselected reciprocating paths of travel at selected inclinations relative to the floor as the first ends of the respective foot links travel along their paths of travel, the guide including a length substantially defining a path of travel for the second ends of the first and second foot links so that when the exercise device is in use and when the second end of one of the foot links travels forwardly from a rearmost position, a heel portion of the user's foot and associated heel supporting section of the foot support initially rises at a faster rate than a toe portion and associated toe supporting section of the foot support thereof, and when the second rearward end of the foot link travels rearwardly from a foremost position, the heel portion of the user's foot and associated heel supporting section of the foot support initially lowers at a faster rate than the toe portion and associated toe supporting section of the foot support, the guide is pivotally coupled to the frame at a first location; and

an elevation system having an extension which engages the guide at a second location spaced from the first location along a length of the guide, the elevation system being manually operable for selectively changing the inclination relative to the floor of the reciprocating paths of travel of the second ends of the first and second foot links to selectively adjust the angular orientation of the guide relative to the floor, by selectively changing at least one of the elevation and angular orientation of the guide relative to the floor, thereby altering the

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nominal relative inclination of a heel supporting section of the foot supporting portion relative to a toe supporting section of the foot supporting portion;

wherein the elevation system may be selectively coupled to the frame above the floor to alter the elevation of the outward extension and thus the angular orientation of the guide relative to the floor.

Claims 23-24 are cancel.

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25. (Allowed). An exercise device to simulate various types of stepping motions, comprising:

a frame having a pivot axis defined thereon, the frame configured to be supported on a floor;

a first and second foot link, each foot link including a first end and a second end; a foot supporting portion for receiving the user's feet, the foot supporting portion supported by the first and second foot links;

a coupling system associated with the first end of each foot link for coupling the first end of each foot link to the pivot axis so that the first end of each foot link travels in a closed path relative to the pivot axis;

a guide associated with the frame and operative to engage and direct the second ends of the foot links along preselected reciprocating paths of travel at selected inclinations relative to the floor as the first ends of the respective foot links travel along their paths of travel, so that when the exercise device is in use and when the second end of one of the foot links travels forwardly from a rearmost position, a heel portion of the user's foot initially rises at a faster rate than a toe portion thereof, and when the second end of the foot link travels rearwardly

from a foremost position, the heel portion of the user's foot initially lowers at a faster rate than the toe portion; and

an elevation system manually operable for selectively changing the inclination relative to the floor of the reciprocating paths of travel of the second ends of the first and second foot links, by selectively changing at least one of the elevation and angular orientation of the guide relative to the floor, thereby altering the nominal relative inclination of a heel supporting section of the foot supporting portion relative to a toe supporting section of the foot supporting portion;

wherein the guide includes a length substantially defining a path of travel for the second ends of the first and second foot links;

wherein the guide is pivotally coupled to the frame at a first location and the elevation system is operable to engage the guide at a second location spaced from the first location along a length of the guide so as to selectively adjust the angular orientation of the guide relative to the floor;

wherein the elevation system includes an outward extension that engages the guide at the second location; and

wherein the elevation system may be selectively coupled to the frame at a plurality of mounting locations spaced above the floor to alter the elevation of the outward extension and thus the angular orientation of the guide relative to the floor.

26. (Allowed). An exercise device to simulate various types of stepping motions, comprising:

a frame having a pivot axis defined thereon, the frame configured to be supported on a floor;

a first and second foot link, each foot link including a first end and a second end; a foot supporting portion for receiving the user's feet, the foot supporting portion supported by the first and second foot links;

a coupling system associated with the first end of each foot link for coupling the first end of each foot link to the pivot axis so that the first end of each foot link travels in a closed path relative to the pivot axis;

a guide associated with the frame and operative to engage and direct the second ends of the foot links along preselected reciprocating paths of travel at selected inclinations

relative to the floor as the first ends of the respective foot links travel along their paths of travel, so that when the exercise device is in use and when the second end of one of the foot links travels forwardly from a rearmost position, a heel portion of the user's foot initially rises at a faster rate than a toe portion thereof, and when the second end of the foot link travels rearwardly from a foremost position, the heel portion of the user's foot initially lowers at a faster rate than the toe portion;

an elevation system manually operable for selectively changing the inclination relative to the floor of the reciprocating paths of travel of the second ends of the first and second foot links, by selectively changing at least one of the elevation and angular orientation of the guide relative to the floor, thereby altering the nominal relative orientation of a heel supporting section of the foot supporting portion relative to a toe supporting section of the foot supporting portion;

wherein the guide includes a length substantially defining a path of travel for the second ends of the first and second foot links;

wherein the guide is pivotally coupled to the frame at a first location and the elevation system is operable to engage the guide at a second location spaced from the first location along a length of the guide so as to selectively adjust the angular orientation of the guide relative to the floor; and

wherein the elevation system includes an outward extension that is slidably coupled to the frame and which engages the guide at the second location, wherein the outward extension may be selectively slid and coupled to the frame at a plurality of locations to selectively alter the angular orientation of the guide relative to the floor.

27. (Currently amended) The exercise device according to claim 22 ~~23~~, wherein the guide includes a track defining the path of travel of the second ends of the first and second foot links, wherein the second ends of the first and second foot links include an appendage that engages the track.

28. (Previously presented) The exercise device according to claim 27, wherein the appendage includes a roller that rollingly engages the track.

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29. (Previously presented) The exercise device according to claim 22, wherein the guide includes a support operable to engage and support the first and second foot links at a location spaced from the first ends of the first and second foot links during reciprocating travel.

Cancel claims 30-35.

36. (Previously presented) The exercise device according to claim 22, wherein the elevation system is operable to adjust the elevation of a first end of the frame relative to an opposite second end of the frame, thereby changing the inclination relative to the floor of the reciprocating paths of travel of the second ends of the first and second foot links.

37. (Previously presented) The exercise device according to claim 36, wherein the first end of the frame is located in proximity to the first ends of the first and second links.

38. (Previously presented) The exercise device according to claim 36, wherein the first end of the frame is located in proximity to the second ends of the first and second links.

Cancel claims 39-46.

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47. (Currently amended). An exercise device to simulate various types of stepping motions, comprising:

- a frame having a first end and a second end configured to be supported on a floor;
- first and second foot links, each foot link having a first end portion and a second end portion;
- a foot support carried by the first and second foot links for receiving the feet of a user;
- a coupling system associated with the first end of each foot link for coupling the first end of each foot link to the frame so that the first end of each foot link travels in a closed loop relative to the frame;

- a guide system for supporting the second end portions of the foot links along a preselected reciprocating path of travel as the first ends of the respective foot links travel along their loops of travel, the guide including a length substantially defining a path of travel for the second ends of the first and second foot links so that when the exercise device is in use, the foot support moves along a generally elliptical path of travel, the guide being pivotally coupled to the frame at a first location; and

- an elevation system operable to engage the guide at a second location spaced from the first location along a length of the guide for manually raising and lowering one of the first end and the second end of the frame, thereby selectively increasing and decreasing the relative elevation of the first end of each foot link relative to the second end of each foot link so as to selectively adjust the angular orientation of the guide relative to the floor, thereby changing the path of travel of the foot support;

- the elevation system comprising a manual lift handle to raise and lower the guide relative to the frame.

48. (Allowed). An exercise device to simulate various types of stepping motions, comprising:

- a frame having a pivot axis defined thereon, the frame configured to be supported on a floor;

- a first and second foot link, each foot link including a first end and a second end; a foot supporting portion for receiving the user's feet, the foot supporting portion supported by the first and second foot links;



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a coupling system associated with the first end of each foot link for coupling the first end of each foot link to the pivot axis so that the first end of each foot link travels in a closed path relative to the pivot axis;

a guide associated with the frame and operative to engage and direct the second ends of the foot links along preselected reciprocating paths of travel oriented at an average inclination relative to the floor as the first ends of the respective foot links travel along their paths of travel, so that when the exercise device is in use and when the second end of one of the foot links travels forwardly from a rearmost position, a heel portion of the user's foot initially rises at a faster rate than a toe portion thereof, and when the second end of the foot link travels rearwardly from a foremost position, the heel portion of the user's foot initially lowers at a faster rate than the toe portion; and

an elevation system manually operable to selectively increase and decrease the average inclination relative to the floor of the preselected reciprocating paths of travel of the second ends of the foot links by changing the elevation of the guide relative to the floor; said elevation system comprising a manually graspable lift handle to raise and lower the guide relative to the frame and a stop structurally distinct from the lift handle to retain the guide in such raised or lowered position.

49. (Previously presented) The exercise device according to claim 22, wherein the path of travel for the second ends of the first and second foot links is linear.

Cancel claim 50.

51. (Previously presented) The exercise device according to claim 23, wherein the path of travel for the second ends is linear.

Cancel claims 52-56.

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